

REMARKS

Claims 7-15, and 18-24 are all the claims pending in the application. Claims 7-9 and 13-24 have been previously withdrawn. This Response, submitted in reply to the Office Action dated March 17, 2008, is believed to be fully responsive to each point of rejection raised therein. Accordingly, favorable reconsideration on the merits is respectfully requested.

Claim Rejections 35 U.S.C. § 103

The following is a summary of the bases on which the Examiner has rejected Claims 10-12:

- Claim 10 stands rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Glinz (US 6,672,349) in view of Rathke (US 5,826,320) and Matsuo (JP 05016143).
- Claims 10-12 stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Morinaga (JP 2002234304) and further in view of Rathke and Matsuo.
- Claims 10-12 stand rejected under 35 U.S.C. 103(a) as being allegedly being unpatentable over Dieckmann (US 6,619,350) and further in view of Glinz, Rathke, and Matsuo.

In rejecting claim 10, the Examiner asserts Rathke teaches a method of forming complex metallic work-pieces using electromagnetic means as claimed. However, the Examiner acknowledges that Rathke does not teach including exhaust holes in a molding operation. Instead, the Examiner asserts that Matsuo cures this deficiency and further asserts that it would have been obvious to apply the teachings of Matsuo to Rathke. Applicant respectfully submits that a person of ordinary skill in the art would not have been motivated to provide vent holes in the forming rig of Rathke and would not have combined Matsuo and Rathke as suggested by the Examiner.

MPEP 2143.01 (I) states "Obviousness can * be established by combining or modifying the teachings of the prior art to produce the claimed invention **where there is some teaching,**

suggestion, or motivation to do so.” Further, MPEP 2143.01(III) states “The mere fact that references can be combined or modified does not render the resultant combination obvious”. These provisions clearly demonstrate that the Examiner must provide a teaching, suggestion, or motivation, why a person of ordinary skill in the art would combine the references as he has suggested. Further, MPEP 2143.01(IV) states that “A statement that modifications of the prior art to meet the claimed invention would have been ‘well within the ordinary skill of the art at the time the claimed invention was made’ because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a prima facie case of obviousness **without some objective reason to combine the teachings**”.

Applicant notes that the Examiner has provided no “objective reason to combine the teachings” of Matsuo and Rathke, nor has the Examiner provided any motivation, other than his assertion that “such a structure is extensively used”. This is clearly nothing more than a statement that the modification was “within the ordinary skill of the art” and contrary to the express teachings of the MPEP as set forth above. Further, for the reasons set forth below, Applicant submits that a person of ordinary skill in the art would not have been motivated to combine the teachings of Matsuo and Rathke as the Examiner has asserted.

Matsuo is related to a process for molding rubber products. Specifically, Matsuo’s teachings relate to a vulcanization process of rubber. In this process, the shape of the un-vulcanized rubber is toroidal and the space between molds and the toroidal shaped un-vulcanized rubber is narrow. Thus, only a very small gap exists between the un-vulcanized rubber and the molds. Further, due to the vulcanizing time is relatively long, the elasticity of the rubber allows the rubber to form a seal within the space between the molds, trapping any air between the rubber and the mold. As the rubber continues to expand within the mold, the

air is compressed and prevents the tire from fully expanding within the mold. Therefore, it is necessary to provide vent holes in the mold to allow the air to escape, as it cannot escape around the edges of the rubber being molded due the seal formed.

Conversely, manufacturing processes of metal products, such as that taught by Rathke, relate to forming a metal by applying an electromagnetic force. In these methods, the shape of the metal work-piece is tubular and the space between molds and the metal work-piece is large, providing significant area around which air can escape. Further, as the forming time is very short (generally .1 second or less) and the metal forming material lacks elasticity, the metal material is unable to easily seal the space between the molds. Therefore, as shown in Figs. 1, 4, and 6 of Rathke, gaps are formed between the work-piece and the molds, which allow air to easily escape. As air can easily escape from between the mold and the metal work-piece, air pressure does not build up and this process does not suffer the problems caused by the sealing action seen in the Matsuo process. Therefore, a person of ordinary skill in the art would have no motivation to provide vent holes as taught by Matsuo, because the metal forming process does not suffer the same problems, which create the need to provide vent holes.

Further, Applicant submits that Matsuo and Rathke are directed to very different processes, and a person of ordinary skill in the art would not think to combine the teachings of these different processes. As discussed above, Matsuo is directed to a tire vulcanization process. To this end it slowly forms the vulcanized rubber by molding a toroidal piece of rubber within a pressure mold for an extended period of time. Conversely, Rathke is directed to a process of manufacturing metal products by applying an electromagnetic force to a tubular work-piece for a very short period of time (on the order of .1 seconds). In other

words, the technical areas of Matsuo and Rathke are completely different and because of these differences, the respective manufacturing processes taught are very different. Therefore, Applicant respectfully submits that a person of ordinary skill in the art would not think to combine them, absent an improper reliance on the teachings of the present application.

For the reasons set forth above, Applicant respectfully submits that a person of ordinary skill in the art would not have been motivated to combine the applied references and would not have found it obvious to provide vent holes in the metal forming mold as suggested by the Examiner. Therefore, Applicant respectfully submits that claim 10 and all claims dependant thereon are patentable over the applied references. Further, Applicant respectfully submits that claim 12 is patentable for analogous reasons and respectfully requests that these rejections be withdrawn.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880 via EFS payment screen. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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